REMARKS

Claims 1-32 are pending in the application with all claims rejected under either §102(e) or §103(a) in view of the Noguchi (U.S. Patent No. 7,037,735) and Hung (U.S. Patent No. 7,162,071) patents.

Claims 15-28 are provisionally rejected under 35 U.S.C. 101.

Reconsideration and allowance of the pending claims is respectfully requested in view of the remarks below.

Double Patenting

Claims 15-28 are provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 1-27 of copending Application No. 10/749,670. As this issue is not yet ripe, Applicant will address this issue at the proper time.

Claim Rejections – 35 U.S.C. § 102

Claims 15-19, 21-26 and 28 are rejected under 35 U.S.C. 102(e) as being anticipated by Noguchi et al. (U.S. Patent No. 7,037,735).

Method claim 15 includes the step of "comparing the first differential image data with a ***preset*** threshold value." The threshold value in Noguchi is not preset, but rather is calculated based on standard deviation [e.g. Equation (8) of col. 37, line 63] only after the signal level of the entire wafer is detected.

Method claim 15 also includes the step of "forming a third differential image data of the target pixel when the second differential image data of the target pixel is within the reference size range of the specific defect." Noguchi does not complete this two step process—forming second differential data and then forming third differential data from the second data. Instead, Noguchi comparison circuits 531-535 have different size filters for detecting foreign particles with different dimensions (e.g. a window of 1x1 pixel, 3x3 pixels, 4x4 pixels, 5x5 pixels, etc.). A logical sum circuit [e.g. col. 44, line 66] sums the signal outputs of comparison circuits. The result allows Noguchi to detect particles having low detection-signal levels and spread shape. [col. 45, lines 1-5] Also, the fact that Noguchi is arranged to detect "infinitesimal particles" seems to indicate that a size range is not the determinative factor in whether a pixel is noted as "defective." Because Noguchi seems to consider low-detection signal level signals, and these

low signals would most likely not pass the differential threshold of the present invention, then Noguchi and the present invention as set forth in claim 15 are different. Rejection under §102(e) is therefore not possible.

Apparatus claim 21 has similar operational limitations to that of claim 15 in that the checking unit operates to convert first differential image data to second differential image data and then second differential image data to third differential image data if the second differential image data of the target pixel is within the reference size range.

The Examiner notes that each time the reference dimensions are changed, a new output is generated (paragraph 5(b)). However, this Noguchi procedure does not further limit the pixels being looked at as defective. Whereas the claims narrow the list of possible defective pixels by creating a second image data, Noguchi looks at all pixels.

Claim Rejections – 35 U.S.C. § 103

Claims 1-14 and 29-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Noguchi et al. (U.S. Patent No. 7,037,735) in view of Hung et al. (U.S. Patent No. 7,162,071). Claims 20 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Noguchi et al.

Noguchi and Hung appear to be incompatible in combination with Hung stating, "the present classification method eliminates the need for light calibration and for pixel conversion." [Hung, col. 2, lines 57-59] As such, one knowledgeable in the art would not be motivated to combine several elements of Noguchi with Hung without explicit teachings to do so that overcome this statement within Hung.

Apparatus claim 29 includes the element of "a reference setting unit for setting a threshold value, wherein the threshold value is digital image data of a specific defect." Noguchi sets threshold values based on a standard deviation calculation—that is, pixels having image differences greater than a threshold amount (Thl=σ·constant). The threshold calculation uses a very different analysis method than that detailed in the Hung reference, and it would not be obvious to one skilled in the art to make a simple substitution of the Hung threshold setting feature with that of Noguchi.

For the foregoing reasons, reconsideration and allowance of claims 1-32 of the application as amended is requested. The Examiner is encouraged to telephone the undersigned at (503) 222-3613 if it appears that an interview would be helpful in advancing the case.

Respectfully submitted,

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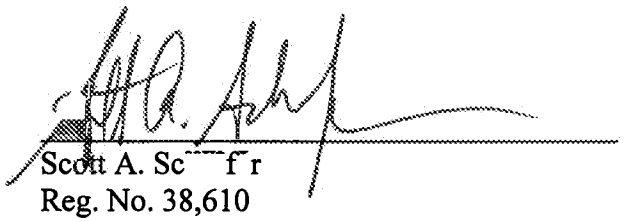

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